ART 1/2 MODIFICATION NOTE 3
(For Electronics Technicians)

SUBJECT : Pibal Timer Controller

PURPOSE : To synchronize the Pibal Timer with the ART System

EQUIPMENT AFFECTED : RCU or MCU

PARTS REQUIRED :
1 - Pibal Timer Controller
2 - Connector (MS 3106A-12S-3S)
2 - Connector (MS 3102A-12S-3P)
3 - Spade Lugs
1 - Pin Tip Plug (for T.P.6)
1 - Mounting Plate
2 - 10-32 x 1/2-inch screws
2 - 10-32 nuts
2 - #10 washers
4 - 4-40 x 1/2-inch screws

MOD PROCUREMENT : The required parts will be mailed to each station automatically without station action.

SPECIAL TOOLS REQUIRED : None

TEST EQUIPMENT REQUIRED : None

TIME REQUIRED : 3 hours

General:

A pulse generated by the actuation of the MANUAL RELEASE button at either the MCU or RCU, or the REMOTE RELEASE button at the RCU, is used to energize the Pibal Timer Controller (PTC), starting the Pibal Timer. When the PTC is connected to the RCU, only a release from the RCU will energize the PTC; a release from the MCU will not energize the PTC. When the PTC is connected to the MCU, a release from either the RCU or MCU will energize the PTC. A 2-conductor, 22-gauge cable such as WSSN 015-C-5-2 (not supplied) can be run between the MCU and the optical theodolite (Option II) or between the RCU and the optical theodolite (Option I). A schematic of the Pibal Controller is shown in figure 7.

Each Upper Air ART site may install one Or both of the two options listed below.

Procedure:

OPTION I (RCU)

1. Turn off AC power to the RCU.

2 Install the supplied receptacle MS 3102A-12S-3P in a convenient location in the RCU enclosure. See example in figure 1.

3. Wire the receptacle as shown in figure 2.

4. Fabricate a cable to connect the RCU and the Pibal Timer Controller at the optical theodolite site (see figure 3).

5. Apply AC power to the RCU.

Check-Out Procedure:

1. Connect the Pibal Timer Controller to the RCU.

2. Connect the Pibal Timer to the Pibal Timer Controller.

3. Turn PTC switch on.

4. Press the MANUAL RELEASE button at the RCU and observe that the Pibal Timer operates.

OPTION II (MCU)

1. Assemble receptacle MS-3102A-12S-3P to the mounting plate, using the 4-40 hardware provided.

2. Fabricate a ground connection from Pin B to one of the receptacle mounting screws. Use the spade lug provided.

3. Pull the MCU chassis fully forward on the guide rails, then determine the length of wire required from the selected location of the receptacle to 3A3A1A6-TP6.

4. Cut the wire to length, solder the Tip plug to one end, and connect the other end to Pin A of the receptacle.

5. Mount the receptacle to the rear of the DCA cabinet as shown in figure 6. Use the 10-32 hardware provided.

6. Insert the Tip plug into 3A3A1A6-TP6, push the MCU chassis into the cabinet, and position the wire to prevent interference with the movement of the MCU chassis.

7. Fabricate a cable to connect the MCU and the Pibal Timer Controller at the optical theodolite site (see figure 5).

8. Apply AC power to the MCU.

Check-Out Procedure:

1. Connect the Pibal Timer Controller to the MCU.

2. Connect the Pibal Timer to the Pibal Timer Controller.

3. Turn PTC switch on.

4. Press the MANUAL RELEASE button at the MCU and observe that the Pibal Timer operates.

RCU ENCLOSURE

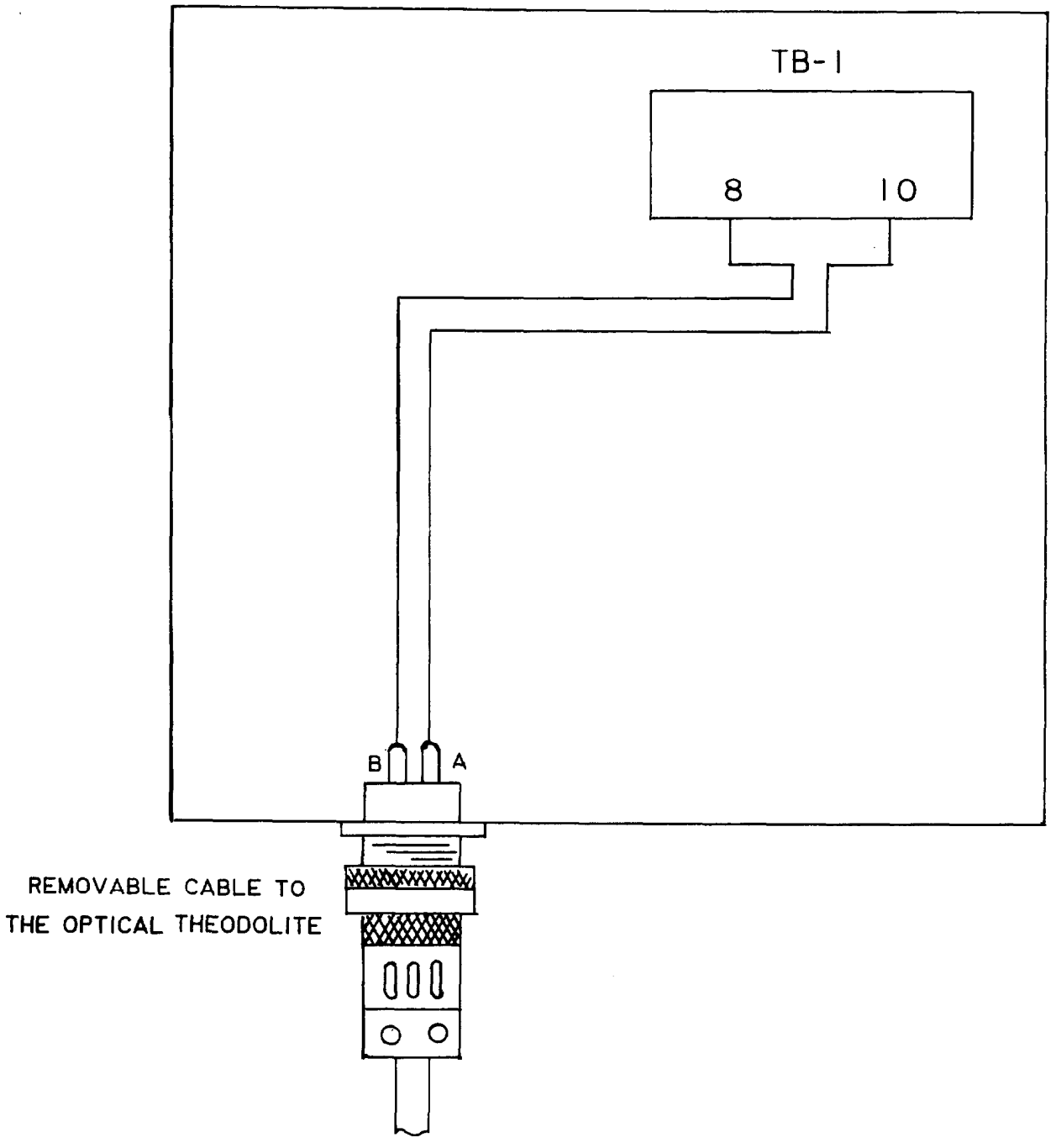
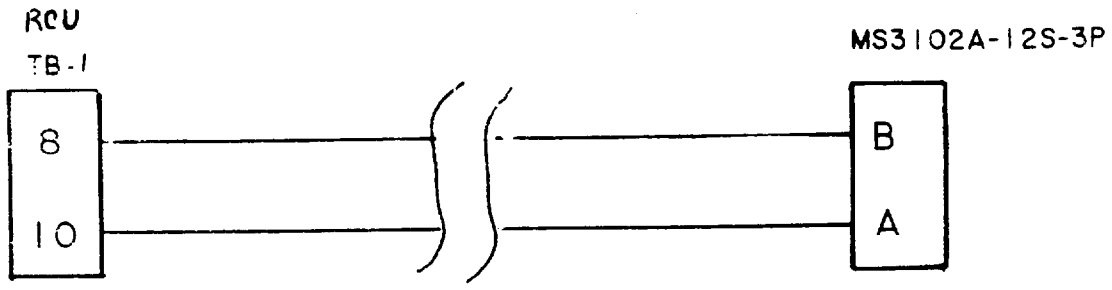
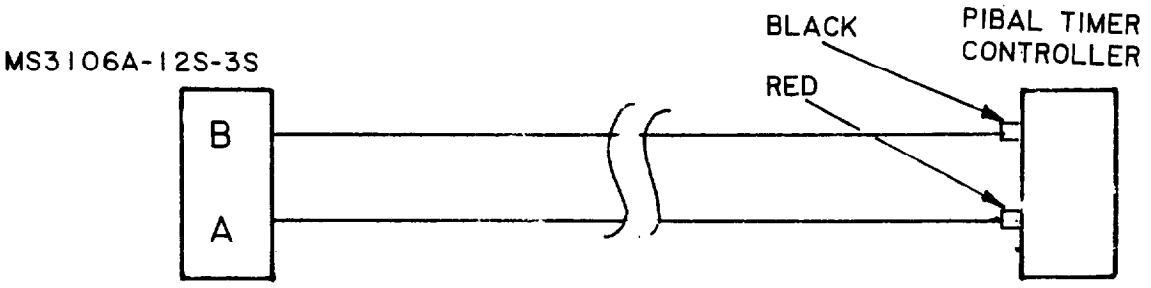


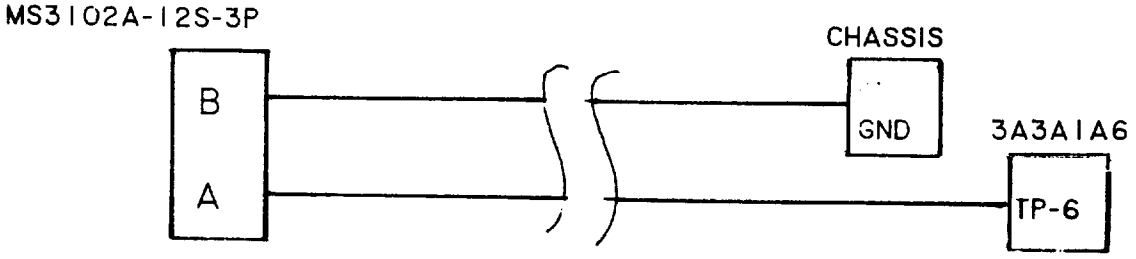
FIGURE 1



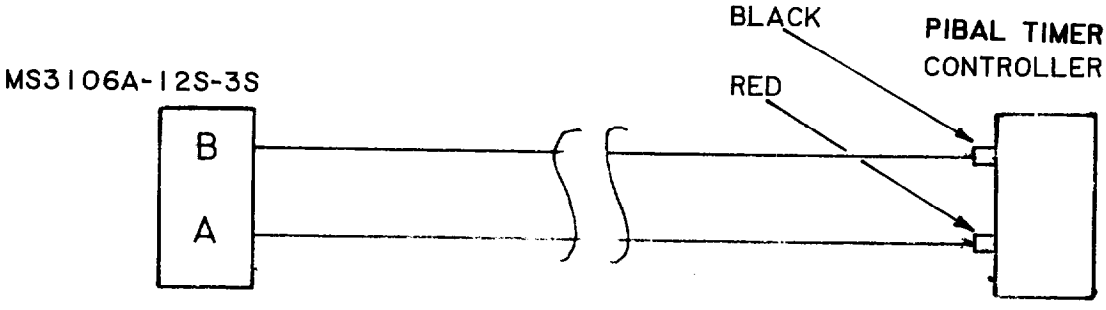
RCU WIRING
FIG. 2



RCU TO PIBAL TIMER CONTROLLER
FIG. 3



MCU WIRING
FIG. 4



MCU TO PIBAL TIMER CONTROLLER
FIG. 5

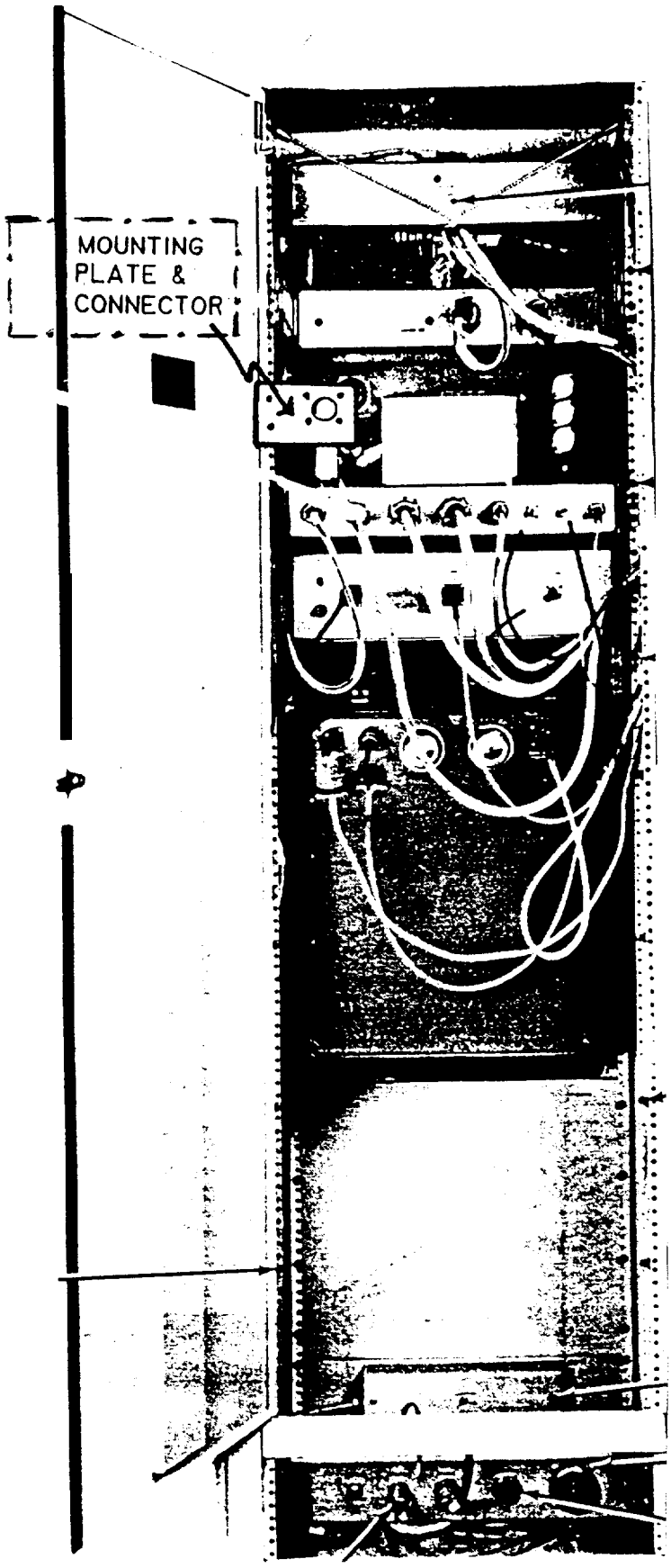
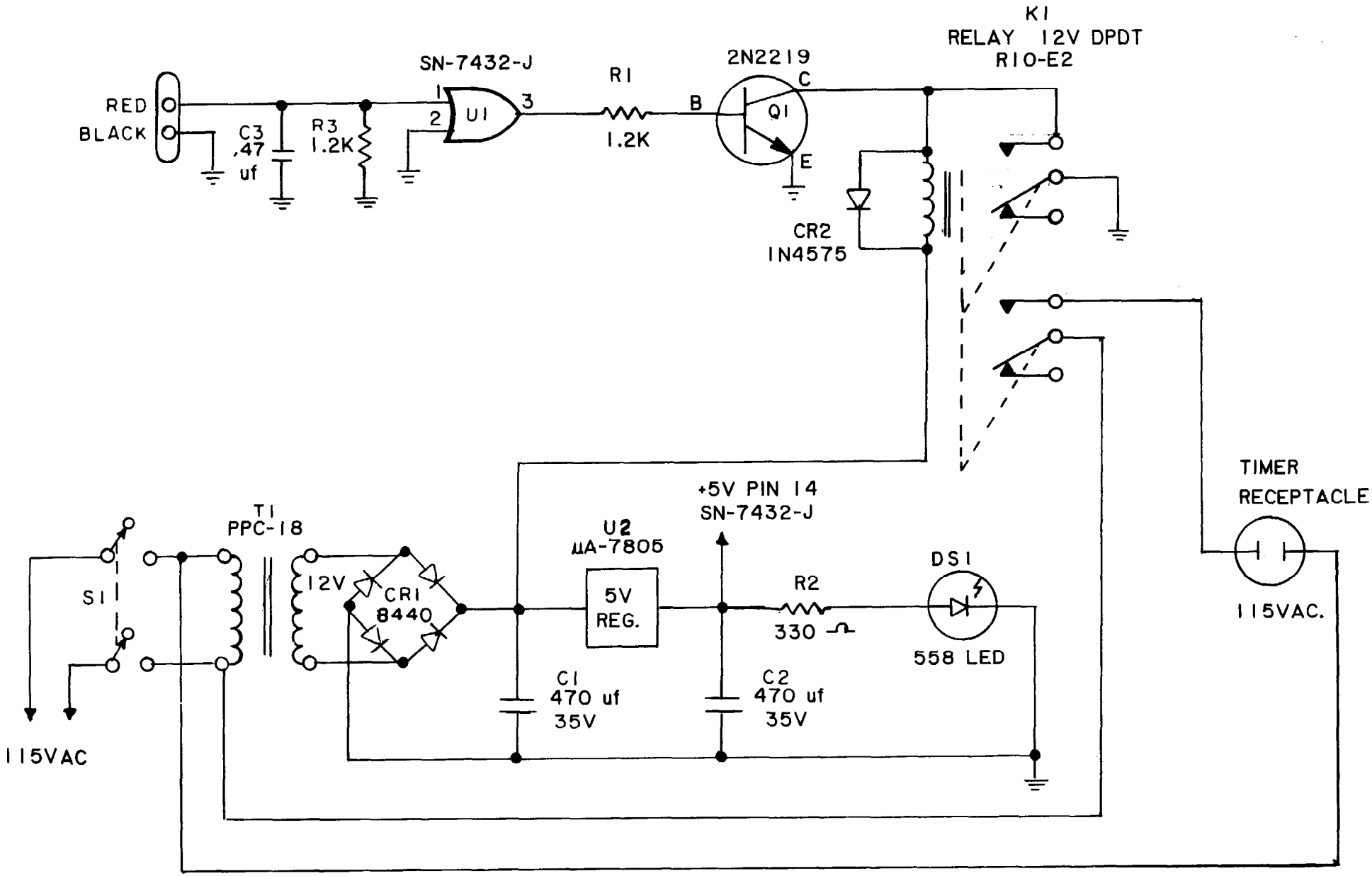


FIGURE 6



PIBAL TIMER CONTROLLER

FIGURE 7